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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,002	06/13/2006	Roberto A Macina	DEX-0547	8194
32800 7590 01/14/2008 LICATA & TYRRELL P.C. 66 E. MAIN STREET MARLTON, NJ 08053				
			EXAMINER MARTINELL, JAMES	
			ART UNIT 1634	PAPER NUMBER
			NOTIFICATION DATE 01/14/2008	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

poreilly@licataandtyrrell.com

## Office Action Summary

Application No.

10/538,002

Applicant(s)

MACINA ET AL.

Examiner

James Martinell

Art Unit

1634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 11-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 15-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 6/3/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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Applicant's election with traverse of the requirement for restriction in the reply filed on November 5, 2007 is acknowledged. The traversal is on the ground(s) that "a search of the art relating to an elected nucleic acid sequence should reveal art relating to the protein encoded thereby and antibodies thereto". This is not found persuasive because the searches of the three Groups of inventions are not co-extensive. It is noted that applicants did not argue against the selection of a single sequence for examination on the merits.

The requirement is still deemed proper and is therefore made FINAL.

Claims 11-14, 15 (insofar as it is drawn to polypeptide assays) and 16-18 (insofar as they are drawn to kits containing polypeptides (claim 16), methods of treatment using polypeptides (claim 17), and polypeptide vaccines (claim 18)) are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on November 5, 2007.

The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP §608.01. Embedded hyperlink and/or other form of browser-executable code appear in at least the following locations:

- (a) page 195, line 6.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10 and 15-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are vague, indefinite, and incomplete.

- (a) Claims 1 and 15-18 are vague and indefinite because they claim more than was elected. Claims 1, 15, 16, and 17 are drawn to or require the use of

more than one selected nucleic acid sequence. Claim 15 (parts (a) (v) and (vi) and part (b) comparing polypeptide amounts) is drawn to a non-elected invention. Claim 16 (part (e)) is drawn to kits containing polypeptides. Claim 17 (part (e)) is drawn to methods of using polypeptides. Part of claim 18 is drawn to polypeptide vaccines.

- (b) The recitation of "selectively hybridizes" (claims 1, 15, 16, and 17) is vague, indefinite, and incomplete because nucleic acid molecular hybridization is a process in which selective hybridization is dependent upon competing target in the hybridization mixture (*e.g.*, see Kennell (Progr. Nucl. Acid Res. Mol. Biol. 11: 259 (1971)) cited here as of interest). Since the claims give no information about the presence or absence of competing targets, the claims are vague, indefinite, and incomplete. The metes and bounds of the claims are not clear.
- (c) The recitation of "selectively hybridize" (claim 7) is vague, indefinite, and incomplete because nucleic acid molecular hybridization is a process in which selective hybridization is dependent upon competing target in the hybridization mixture (*e.g.*, see Kennell (Progr. Nucl. Acid Res. Mol. Biol. 11: 259 (1971)) cited here as of interest). Since the claim gives no information about the presence or absence of competing targets, the claim is vague, indefinite, and incomplete. The metes and bounds of the claim are not clear.
- (d) Claims 16, 17, and 18 are incomplete because they depend from cancelled claim 12.
- (e) Claims 7 and 10 are vague and indefinite because they are improper hybrid claims. Each of claims 7 and 10 is a method claim, while claim 1, from which each of claims 7 and 10 depends, is a composition claim.

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 8, 9, and 10 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by either one of Stormann et al (U.S. Patent No. 6,077,675) or Drmanac et al (WO 01/75067 A2 (October 11, 2001)). Stormann et al discloses a nucleic acid that shares 3589 nucleotides with SEQ ID NO: 9 of the instant claims (see the alignment below). Thus, the nucleic acids of Stormann et al would hybridize to SEQ ID NO: 9 of the instant claims. Kennell (Progr. Nucl. Acid Res. Mol. Biol. 11: 259 (1971) paragraph bridging pages 260-261) teaches that a heteroduplex of 25-50 base pairs approaches maximal stability, thus, the nucleic acids of Stormann et al are embraced by the claims. In addition, Stormann et al teaches the use of vectors and host cells to produce a polypeptide encoded by the nucleic acid (*e.g.*, see column 11, line 20 through column 12, line 27).

Alignment of Stormann et al SEQ ID NO: 1 with SEQ ID NO: 9

```
RESULT 1
US-08-823-110-2
; Sequence 2, Application US/08823110
; Patent No. 6077675
; GENERAL INFORMATION:
; APPLICANT: Stormann, Thomas M.
; APPLICANT: Simin, Rachel T.
; APPLICANT: Hammerland, Lance G.
; APPLICANT: Fuller, Forrest H.
; TITLE OF INVENTION: NOVEL HUMAN METABOTROPIC
; TITLE OF INVENTION: GLUTAMATE RECEPTOR
; NUMBER OF SEQUENCES: 16
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Lyon & Lyon
; STREET: 633 West Fifth Street
; STREET: Suite 4700
; CITY: Los Angeles
; STATE: California
; COUNTRY: U.S.A.
; ZIP: 90071-2066
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
; MEDIUM TYPE: storage
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: IBM P.C. DOS 5.0
; SOFTWARE: FastSEQ for Windows 2.0
```

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; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/823,110
; FILING DATE: March 24, 1997
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/604,298
; FILING DATE: February 21, 1996
; ATTORNEY/AGENT INFORMATION:
; NAME: Warburg, Richard J.
; REGISTRATION NUMBER: 32,327
; REFERENCE/DOCKET NUMBER: 224/259
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (213) 489-1600
; TELEFAX: (213) 955-0440
; TELEX: 67-3510
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3833 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-823-110-2

```

Qy	1	GTGTGCTGGAAGGCGTGCCCCGCTGGGCTTCTTACCCGCGCCCTCTGCGGGGAGCAGG	60
Db	145	GTGACATGGAGCTGCGGGGCCCCGGCGGGCTTCTTACCCGCGCCCTCTGCGGGGAGCAGG	204
Qy	61	GAATAATTCTGCTACAAGGCTGATTTC AAGGACATGAATTGTTGACCTCATCCCAACATC	120
Db	205	GAATAATTCTGCTACAAGGCTGATTTC AAGGACATGAATTGTTGACCTCATCCCAACATC	264
Qy	121	AGAACCTCAGATGTTCTAATTTTTCACCAATTCCAGGCAAGTTGATCTTATAAGGAAATA	180
Db	265	AGAACCTCAGATGTTCTAATTTTTCACCAATTCCAGGCAAGTTGATCTTATAAGGAAATA	324
Qy	181	AAATTGAACCTTAGGGGTCTGATGGAAATTCACCTGTGACATTCAAATCAAGAAAACCTGC	240
Db	325	AAATTGAACCTTAGGGGTCTGATGGAAATTCACCTGTGACATTCAAATCAAGAAAACCTGC	384
Qy	241	TAATGCCACAGAGCCTTTTCCCATGGGCCCTGATGGTAGCCTCCAGAAGGTGCAGCCT	300
Db	385	TAATGCCACAGAGCCTTTTCCCATGGGCCCTGATGGTAGCCTCCAGAAGGTGCAGCCT	444
Qy	301	CAGGTGGTGCCCTTTCTGCTGTGTGCAAGAATAAACTTTGGGTCTTGGATTGCAATACC	360
Db	445	CAGGTGGTGCCCTTTCTTCTGTG--GCAAGAATAAACTTTGGGTCTTGGATTGCAATACC	502
Qy	361	ACCTGTGGAGAAAATGGTATGCGAGGGGAAAGCGATCAGCCTCTTGCCCTTGTTTCTTCCT	420
Db	503	ACCTGTGGAGAAAATGGTATGCGAGGGGAAAGCGATCAGCCTCTTGCCCTTGTTTCTTCCT	562
Qy	421	CTTGACCGCCAAGTTCTACTGGATCCTCACAATGATGCAAGAAGCTCACAGCCAGGAGTA	480
Db	563	CTTGACCGCCAAGTTCTACTGGATCCTCACAATGATGCAAGAAGCTCACAGCCAGGAGTA	622
Qy	481	TGCCCATTCCATACGGGTGGATGGGGACATTATTTTGGGGGGTCTCTTCCCTGTCCACGC	540
Db	623	TGCCCATTCCATACGGGTGGATGGGGACATTATTTTGGGGGGTCTCTTCCCTGTCCACGC	682
Qy	541	AAAGGGAGAGAGAGGGGTGCCTTG TGGGGAGCTGAAGAAGGAAAAGGGGATTACAGACT	600
Db	683	AAAGGGAGAGAGAGGGGTGCCTTG TGGGGAGCTGAAGAAGGAAAAGGGGATTACAGACT	742

Qy	601	GGAGGCCATGCTTTATGCAATTGACCAGATTAAACAAGGACCCTGATCTCCTTTCCAACAT	660
Db	743	GGAGGCCATGCTTTATGCAATTGACCAGATTAAACAAGGACCCTGATCTCCTTTCCAACAT	802
Qy	661	CACTCTGGGTGTCCGCATCCTCGACACGTGCTCTAGGGACACCTATGCTTTGGAGCAGTC	720
Db	803	CACTCTGGGTGTCCGCATCCTCGACACGTGCTCTAGGGACACCTATGCTTTGGAGCAGTC	862
Qy	721	TCTAACATTTCGTGCAGGCATTAATAGAGAAAGATGCTTCGGATGTGAAGTGTGCTAATGG	780
Db	863	TCTAACATTTCGTGCAGGCATTAATAGAGAAAGATGCTTCGGATGTGAAGTGTGCTAATGG	922
Qy	781	AGATCCACCCATTTTCACCAAGCCCACAGATTTCTGGCGTCATAGGTGCTGCAGCAAG	840
Db	923	AGATCCACCCATTTTCACCAAGCCCACAGATTTCTGGCGTCATAGGTGCTGCAGCAAG	982
Qy	841	CTCCGTGTCCATCATGGTTGCTAACATTTTAAGACTTTTTAAGATACCTCAAATCAGCTA	900
Db	983	CTCCGTGTCCATCATGGTTGCTAACATTTTAAGACTTTTTAAGATACCTCAAATCAGCTA	1042
Qy	901	TGCATCCACAGCCCCAGAGCTAAGTGATAACACCAGGTATGACTTTTTCTCTCGAGTGGT	960
Db	1043	TGCATCCACAGCCCCAGAGCTAAGTGATAACACCAGGTATGACTTTTTCTCTCGAGTGGT	1102
Qy	961	TCCGCCTGACTCCTACCAAGCCCACAGCCATGGTGGACATCGTGACAGCACTGGGATGGAA	1020
Db	1103	TCCGCCTGACTCCTACCAAGCCCACAGCCATGGTGGACATCGTGACAGCACTGGGATGGAA	1162
Qy	1021	TTATGTTTCGACACTGGCTTCTGAGGGGAACATGGTGAGAGCGGTGTGGAGGCCCTTCAC	1080
Db	1163	TTATGTTTCGACACTGGCTTCTGAGGGGAACATGGTGAGAGCGGTGTGGAGGCCCTTCAC	1222
Qy	1081	CCAGATCTCGAGGGAGATTGGTGGTGTTTGCAATTGCTCAGTCACAGAAAATCCACGTGA	1140
Db	1223	CCAGATCTCGAGGGAGATTGGTGGTGTTTGCAATTGCTCAGTCACAGAAAATCCACGTGA	1282
Qy	1141	ACCAAGACCTGGAGAATTTGAAAAAATTATCAAACGCTGTAGAAACACCTAATGCTCG	1200
Db	1283	ACCAAGACCTGGAGAATTTGAAAAAATTATCAAACGCTGTAGAAACACCTAATGCTCG	1342
Qy	1201	AGCAGTGATTATGTTTGCCAATGAGGATGACATCAGGAGGATATTGGAAGCAGCAAAAAA	1260
Db	1343	AGCAGTGATTATGTTTGCCAATGAGGATGACATCAGGAGGATATTGGAAGCAGCAAAAAA	1402
Qy	1261	ACTAAACCAAAGTGGGCATTTTCTCTGGATTGGCTCAGATAGTTGGGGATCCAAAATAGC	1320
Db	1403	ACTAAACCAAAGTGGGCATTTTCTCTGGATTGGCTCAGATAGTTGGGGATCCAAAATAGC	1462
Qy	1321	ACCTGTCTATCAGCAAGAGGAGATTGCAGAAGGGGCTGTGACAATTTTGCCCAAACGAGC	1380
Db	1463	ACCTGTCTATCAGCAAGAGGAGATTGCAGAAGGGGCTGTGACAATTTTGCCCAAACGAGC	1522
Qy	1381	ATCAATTGATGGATTTGATCGATACTTTAGAAGCCGAACCTCTTGCCAATAATCGAAGAAA	1440
Db	1523	ATCAATTGATGGATTTGATCGATACTTTAGAAGCCGAACCTCTTGCCAATAATCGAAGAAA	1582
Qy	1441	TGTGTGGTTTGAGAATTCTGGGAGGAGAATTTGGCTGCAAGTTAGGATCACATGGGAA	1500
Db	1583	TGTGTGGTTTGAGAATTCTGGGAGGAGAATTTGGCTGCAAGTTAGGATCACATGGGAA	1642
Qy	1501	AAGGAACAGTCATATAAAGAAATGCACAGGGCTGGAGCGAATTGCTCGGGATTCATCTTA	1560
Db	1643	AAGGAACAGTCATATAAAGAAATGCACAGGGCTGGAGCGAATTGCTCGGGATTCATCTTA	1702

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Qy 1561 TGAACAGGAAGGAAAGGTCCAATTTGTAATTGATGCTGTATATTCCATGGCTTACGCCCT 1620  
|||||  
Db 1703 TGAACAGGAAGGAAAGGTCCAATTTGTAATTGATGCTGTATATTCCATGGCTTACGCCCT 1762  
Qy 1621 GCACAATATGCACAAAGATCTCTGCCCTGGATACATTGGCCTTTGTCCACGAATGAGTAC 1680  
|||||  
Db 1763 GCACAATATGCACAAAGATCTCTGCCCTGGATACATTGGCCTTTGTCCACGAATGAGTAC 1822  
Qy 1681 CATTGATGGGAAAGAGCTACTTGGTTATATTCCGGCTGTAAATTTAATGGTTGCCGAAG 1740  
|||||  
Db 1823 CATTGATGGGAAAGAGCTACTTGGTTATATTCCGGCTGTAAATTTAAT----- 1871  
Qy 1741 AGGGATCCAGATGTCTCTACCCTGGCCAACTCTTTTACTCCTTCATTTCCAGTAGTTG 1800  
Db 1872 ----- 1871  
Qy 1801 GGCAGTGCTGGCACTCCTGTCACTTTTAATGAAAACGGAGATGCTCCTGGACGTTATGAT 1860  
|||||  
Db 1872 GGCAGTGCTGGCACTCCTGTCACTTTTAATGAAAACGGAGATGCTCCTGGACGTTATGAT 1931  
Qy 1861 ATCTTCCAGTATCAAATAACCAACAAAAGCACAGAGTACAAAGTCATCGGCCACTGGACC 1920  
|||||  
Db 1932 ATCTTCCAGTATCAAATAACCAACAAAAGCACAGAGTACAAAGTCATCGGCCACTGGACC 1991  
Qy 1921 AATCAGCTTCATCTAAAAGTGGAAGACATGCAGTGGGCTCATAGAGAACATACTCACCCG 1980  
|||||  
Db 1992 AATCAGCTTCATCTAAAAGTGGAAGACATGCAGTGGGCTCATAGAGAACATACTCACCCG 2051  
Qy 1981 GCGTCTGTCTGCAGCCTGCCGTGTAAGCCAGGGGAGAGGAAGAAAACGGTGAAAGGGGTC 2040  
|||||  
Db 2052 GCGTCTGTCTGCAGCCTGCCGTGTAAGCCAGGGGAGAGGAAGAAAACGGTGAAAGGGGTC 2111  
Qy 2041 CCTTGCTGCTGGCACTGTGAACGCTGTGAAGGTTACAACACCAGGTGGATGAGCTGTCC 2100  
|||||  
Db 2112 CCTTGCTGCTGGCACTGTGAACGCTGTGAAGGTTACAACACCAGGTGGATGAGCTGTCC 2171  
Qy 2101 TGTGAACCTTGCCCTCTGGATCAGAGACCCAACATGAACCGCACAGGCTGCCAGCTTATC 2160  
|||||  
Db 2172 TGTGAACCTTGCCCTCTGGATCAGAGACCCAACATGAACCGCACAGGCTGCCAGCTTATC 2231  
Qy 2161 CCCATCATCAAATTGGAGTGGCATTCTCCCTGGGCTGTGGTGCCTGTGTTTGTGCAATA 2220  
|||||  
Db 2232 CCCATCATCAAATTGGAGTGGCATTCTCCCTGGGCTGTGGTGCCTGTGTTTGTGCAATA 2291  
Qy 2221 TTGGGAATCATCGCCACCACCTTTGTGATCGTGACCTTTGTCCGCTATAATGACACACCT 2280  
|||||  
Db 2292 TTGGGAATCATCGCCACCACCTTTGTGATCGTGACCTTTGTCCGCTATAATGACACACCT 2351  
Qy 2281 ATCGTGAGGGCTTCAGGACGCGAACTTAGTTACGTGCTCCTAACGGGGATTTTCTCTGT 2340  
|||||  
Db 2352 ATCGTGAGGGCTTCAGGACGCGAACTTAGTTACGTGCTCCTAACGGGGATTTTCTCTGT 2411  
Qy 2341 TATTC AATCAGCTTTTAAATGATTGCAGCACCAGATACAATCATATGCTCCTTCCGACGG 2400  
|||||  
Db 2412 TATTC AATCAGCTTTTAAATGATTGCAGCACCAGATACAATCATATGCTCCTTCCGACGG 2471  
Qy 2401 GTCTTCCTAGGACTTGGCATGTGTTTCAGCTATGCAGCCCTTCTGACCAAAACAAACCGT 2460  
|||||  
Db 2472 GTCTTCCTAGGACTTGGCATGTGTTTCAGCTATGCAGCCCTTCTGACCAAAACAAACCGT 2531  
Qy 2461 ATCCACCGAATATTTGAGCAGGGGAAGAAATCTGTCACAGCGCCCAAGTTCATTAGTCCA 2520  
|||||  
Db 2532 ATCCACCGAATATTTGAGCAGGGGAAGAAATCTGTCACAGCGCCCAAGTTCATTAGTCCA 2591  
Qy 2521 GCATCTCAGCTGGTGATCACCTTCAGCCTCATCTCCGTCCAGCTCCTTGGAGTGTTTGTG 2580



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Db 2592 ||||| GCATCTCAGCTGGTGATCACCTTCAGCCTCATCTCCGTCAGCTCCTTGGAGTGTTGTC 2651

Qy 2581 TGGTTTGTGTGGATCCCCCCCACATCATCATTGACTATGGAGAGCAGCGGACACTAGAT 2640

Db 2652 ||||| TGGTTTGTGTGGATCCCCCCCACATCATCATTGACTATGGAGAGCAGCGGACACTAGAT 2711

Qy 2641 CCAGAGAAGGCCAGGGGAGTGCTCAAGTGTGACATTTCTGATCTCTCACTCATTGTTC 2700

Db 2712 ||||| CCAGAGAAGGCCAGGGGAGTGCTCAAGTGTGACATTTCTGATCTCTCACTCATTGTTC 2771

Qy 2701 CTTGGATACAGTATCCTCTTGATGGTCACCTGTACTGTTTATGCCATTAAAACGAGAGGT 2760

Db 2772 ||||| CTTGGATACAGTATCCTCTTGATGGTCACCTGTACTGTTTATGCCATTAAAACGAGAGGT 2831

Qy 2761 GTCCCAGAGACTTTCAATGAAGCCAAACCTATTGGATTTACCATGTATACCACCTGCATC 2820

Db 2832 ||||| GTCCCAGAGACTTTCAATGAAGCCAAACCTATTGGATTTACCATGTATACCACCTGCATC 2891

Qy 2821 ATTTGGTTAGCTTTCATCCCCATCTTTTTTGGTACAGCCAGTCAGCAGAAAAGATGTAC 2880

Db 2892 ||||| ATTTGGTTAGCTTTCATCCCCATCTTTTTTGGTACAGCCAGTCAGCAGAAAAGATGTAC 2951

Qy 2881 ATCCAGACAACAACACTTACTGTCTCCATGAGTTTAAGTGCTTCAGTATCTCTGGGCATG 2940

Db 2952 ||||| ATCCAGACAACAACACTTACTGTCTCCATGAGTTTAAGTGCTTCAGTATCTCTGGGCATG 3011

Qy 2941 CTCTATATGCCCAAGGTTTATATTATAATTTTCATCCAGAACAGAATGTTCAAAAACGC 3000

Db 3012 ||||| CTCTATATGCCCAAGGTTTATATTATAATTTTCATCCAGAACAGAATGTTCAAAAACGC 3071

Qy 3001 AAGAGGAGCTTCAAGGCTGTGGTGACAGCTGCCACCATGCAAAGCAAAGTATCCAAAAA 3060

Db 3072 ||||| AAGAGGAGCTTCAAGGCTGTGGTGACAGCTGCCACCATGCAAAGCAAAGTATCCAAAAA 3131

Qy 3061 GGAAATGACAGACCAAATGGCGAGGTGAAAAGTGAAGTCTGTGAGAGTCTTGAAACCAAC 3120

Db 3132 ||||| GGAAATGACAGACCAAATGGCGAGGTGAAAAGTGAAGTCTGTGAGAGTCTTGAAACCAAC 3191

Qy 3121 A-----CTTC 3125

Db 3192 ||||| AGTAAGTCATCTGTAGAGTTCCGATGGTCAAGAGCGGGAGCACTTCCTAATAGATCTTC 3251

Qy 3126 CTCTACCAAGACAACATATATCAGTTACAGCAATCATTCATCTGAAACAGGGAAATGGC 3185

Db 3252 ||||| CTCTACCAAGACAACATATATCAGTTACAGCAATCATTCATCTGAAACAGGGAAATGGC 3311

Qy 3186 ACAATCTGAAGAGATGTGGTATATGATCTTAAATGATGAACATGAGACCGCAAAAATTCA 3245

Db 3312 ||||| ACAATCTGAAGAGACGTGGTATATGATCTTAAATGATGAACATGAGACCGCAAAAATTCA 3371

Qy 3246 CTCCTGGAGATCTCCGTAGACTACAATCAATCAATCAATAGTCAGTCTTGTAAGGAACA 3305

Db 3372 ||||| CTCCTGGAGATCTCCGTAGACTACAATCAATCAATCAATAGTCAGTCTTGTAAGGAACA 3431

Qy 3306 AAAATTAGCCATGAGCCAAAAGTATCAATAAACGGGGAGTGAAGAAACCCGTTTTATACA 3365

Db 3432 ||||| AAAATTAGCCATGAGCCAAAAGTATCAATAAACGGGGAGTGAAGAAACCCGTTTTATACA 3491

Qy 3366 ATAAACCAATGAGTGTCAAGCTAAAGTATTGCTTATTCATGAGCAGTTAAACCAATCA 3425

Db 3492 ||||| ATAAACCAATGAGTGTCAAGCTAAAGTATTGCTTATTCATGAGCAGTTAAACCAATCA 3551

Qy 3426 CAAAAGGAAAATAATGTTAGCTCGTGAAAAAAATGCTGTTGAAATAAATAATGTCTGA 3485

Db 3552 ||||| CAAAAGGAAAATAATGTTAGCTCGTG-AAAAAAATGCTGTTGAAATAAATAATGTCTGA 3610

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Qy      3486 TGTATTCTTGATTTTTCTGTGATTGTGAGAACTCCCGTTCCTGTCCACATTGTTTAA 3545
          |||
Db      3611 TGTATTCTTGATTTTTCTGTGATTGTGAGAACTCCCGTTCCTGTCCACATTGTTTAA 3670

Qy      3546 CTTGTATAAGACAATGAGTCTGTTTCTTGTAAATGGCTGACCAGATTGAAGCCCTGGGTTG 3605
          |||
Db      3671 CTTGTATAAGACAATGAGTCTGTTTCTTGTAAATGGCTGACCAGATTGAAGCCCTGGGTTG 3730

Qy      3606 TGCTAAAAATAAATGCAATGATTGATGCATGCAATTTTTATACAAATAATTTATTCTA 3665
          |||
Db      3731 TGCTAAAAATAAATGCAATGATTGATGCATGCAATTTTTATACAAATAATTTATTCTA 3790

Qy      3666 ATAATAAAGG 3675
          |||
Db      3791 ATAATAAAGG 3800

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Claims 1-6, 8-10, 16, and 18 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Drmanac et al (WO 01/75067 A2 (October 11, 2001)). Drmanac et al discloses a nucleic acid (SEQ ID NO: 29442) that shares 3351 nucleotides with SEQ ID NO: 9 of the instant claims (see the alignment below). Thus, the nucleic acids of Drmanac et al would hybridize to SEQ ID NO: 9 of the instant claims. Kennell (Progr. Nucl. Acid Res. Mol. Biol. 11: 259 (1971) paragraph bridging pages 260-261) teaches that a heteroduplex of 25-50 base pairs approaches maximal stability, thus, the nucleic acids of Drmanac et al are embraced by the claims. In addition, Drmanac et al teaches the use of vectors and host cells to produce a polypeptide encoded by the nucleic acid (*e.g.*, see page 19, line 7 through page 20, line 24), the use of polynucleotide vaccines (*e.g.*, page 20, lines 17-24), and the inclusion of polynucleotides in kits (*e.g.*, page 87, line 20 through page 89, line 5).

#### Alignment of Drmanac et al SEQ ID NO: 29442 with SEQ ID NO: 9

```

RESULT 3
AAS93638
ID    AAS93638 standard; cDNA; 3940 BP.
XX
AC    AAS93638;
XX
DT    13-FEB-2002 (first entry)
XX
DE    DNA encoding novel human diagnostic protein #29442.
XX

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KW Human; chromosome mapping; gene mapping; gene therapy; forensic;  
KW food supplement; medical imaging; diagnostic; genetic disorder; ss.  
XX  
OS Homo sapiens.  
XX  
PN WO200175067-A2.  
XX  
PD 11-OCT-2001.  
XX  
PF 30-MAR-2001; 2001WO-US008631.  
XX  
PR 31-MAR-2000; 2000US-00540217.  
PR 23-AUG-2000; 2000US-00649167.  
XX  
PA (HYSE-) HYSEQ INC.  
XX  
PI Drmanac RT, Liu C, Tang YT;  
XX  
DR WPI; 2001-639362/73.  
DR P-PSDB; ABG29451.  
XX  
PT New isolated polynucleotide and encoded polypeptides, useful in  
PT diagnostics, forensics, gene mapping, identification of mutations  
PT responsible for genetic disorders or other traits and to assess  
PT biodiversity.  
XX  
PS Claim 1; SEQ ID NO 29442; 103pp; English.  
XX  
CC The invention relates to isolated polynucleotide (I) and polypeptide (II)  
CC sequences. (I) is useful as hybridisation probes, polymerase chain  
CC reaction (PCR) primers, oligomers, and for chromosome and gene mapping,  
CC and in recombinant production of (II). The polynucleotides are also used  
CC in diagnostics as expressed sequence tags for identifying expressed  
CC genes. (I) is useful in gene therapy techniques to restore normal  
CC activity of (II) or to treat disease states involving (II). (II) is  
CC useful for generating antibodies against it, detecting or quantitating a  
CC polypeptide in tissue, as molecular weight markers and as a food  
CC supplement. (II) and its binding partners are useful in medical imaging  
CC of sites expressing (II). (I) and (II) are useful for treating disorders  
CC involving aberrant protein expression or biological activity. The  
CC polypeptide and polynucleotide sequences have applications in  
CC diagnostics, forensics, gene mapping, identification of mutations  
CC responsible for genetic disorders or other traits to assess biodiversity  
CC and to produce other types of data and products dependent on DNA and  
CC amino acid sequences. AAS64197-AAS94564 represent novel human diagnostic  
CC coding sequences of the invention. Note: The sequence data for this  
CC patent did not appear in the printed specification, but was obtained in  
CC electronic format directly from WIPO at  
CC ftp.wipo.int/pub/published\_pct\_sequences  
XX  
SQ Sequence 3940 BP; 1071 A; 921 C; 952 G; 996 T; 0 U; 0 Other;  
  
Query Match 89.2%; Score 3331; DB 5; Length 3940;  
Best Local Similarity 99.5%; Pred. No. 0;  
Matches 3351; Conservative 0; Mismatches 15; Indels 1; Gaps 1;  
  
Qy 309 GCCCTTTCTGCTGTGTGCAAGAATAAACTTTGGGTCTTGGATTGCAATACCACCTGTGG 368  
|| ||| | | |||||  
Db 566 GCGGCTTCCGGGATGAGTCGGGAATAAACTTTGGGTCTTGGATTGCAATACCACCTGTGG 625  
  
Qy 369 AGAAATGGTATGCGAGGGAAAGCGATCAGCCTCTTGCCCTTGTTCCTCTTGACCG 428  
|||||  
Db 626 AGAAATGGTATGCGAGGGAAAGCGATCAGCCTCTTGCCCTTGTTCCTCTTGACCG 685  
  
Qy 429 CCAAGTTCTACTGGATCCTCACAATGATGCAAAGAACTCACAGCCAGGAGTATGCCCATT 488  
|||||  
Db 686 CCAAGTTCTACTGGATCCTCACAATGATGCAAAGAACTCACAGCCAGGAGTATGCCCATT 745

Qy	489	CCATACGGGTGGATGGGGACATTATTTTGGGGGGTCTCTTCCCTGTCCACGCAAAGGGAG	548
Db	746	CCATACGGGTGGATGGGGACATTATTTTGGGGGGTCTCTTCCCTGTCCACGCAAAGGGAG	805
Qy	549	AGAGAGGGGTGCCTTGTGGGGAGCTGAAGAAGGAAAAGGGGATTACAGACTGGAGGCCA	608
Db	806	AGAGAGGGGTGCCTTGTGGGGAGCTGAAGAAGGAAAAGGGGATTACAGACTGGAGGCCA	865
Qy	609	TGCTTTATGCAATTGACCAGATTAACAAGGACCCTGATCTCCTTTCCAACATCACTCTGG	668
Db	866	TGCTTTATGCAATTGACCAGATTAACAAGGACCCTGATCTCCTTTCCAACATCACTCTGG	925
Qy	669	GTGTCCGCATCCTCGACACGTGCTCTAGGGACACCTATGCTTTGGAGCAGTCTCTAACAT	728
Db	926	GTGTCCGCATCCTCGACACGTGCTCTAGGGACACCTATGCTTTGGAGCAGTCTCTAACAT	985
Qy	729	TCGTGCAGGCATTAATAGAGAAAAGATGCTTCGGATGTGAAGTGTGCTAATGGAGATCCAC	788
Db	986	TCGTGCAGGCATTAATAGAGAAAAGATGCTTCGGATGTGAAGTGTGCTAATGGAGATCCAC	1045
Qy	789	CCATTTTCACCAAGCCCGACAAGATTCTGGCGTCATAGGTGCTGCAGCAAGCTCCGTGT	848
Db	1046	CCATTTTCACCAAGCCCGACAAGATTCTGGCGTCATAGGTGCTGCAGCAAGCTCCGTGT	1105
Qy	849	CCATCATGGTTGCTAACATTTTAAGACTTTTTAAGATACCTCAAATCAGCTATGCATCCA	908
Db	1106	CCATCATGGTTGCTAACATTTTAAGACTTTTTAAGATACCTCAAATCAGCTATGCATCCA	1165
Qy	909	CAGCCCCAGAGCTAAGTGATAACACCAGGTATGACTTTTTCTCTCGAGTGGTTCCGCCTG	968
Db	1166	CAGCCCCAGAGCTAAGTGATAACACCAGGTATGACTTTTTCTCTCGAGTGGTTCCGCCTG	1225
Qy	969	ACTCCTACCAAGCCCAGCCATGGTGGACATCGTGACAGCACTGGGATGGAATTATGTTT	1028
Db	1226	ACTCCTACCAAGCCCAGCCATGGTGGACATCGTGACAGCACTGGGATGGAATTATGTTT	1285
Qy	1029	CGACACTGGCTTCTGAGGGGAACTATGGTGAGAGCGGTGTGGAGGCCTTCACCCAGATCT	1088
Db	1286	CGACACTGGCTTCTGAGGGGAACTATGGTGAGAGCGGTGTGGAGGCCTTCACCCAGATCT	1345
Qy	1089	CGAGGGAGATTGGTGGTGTTCATTGCTCAGTCACAGAAAATCCCACGTGAACCAAGAC	1148
Db	1346	CGAGGGAGATTGGTGGTGTTCATTGCTCAGTCACAGAAAATCCCACGTGAACCAAGAC	1405
Qy	1149	CTGGAGAATTTGAAAAAATTATCAAACGCCTGCTAGAAACACCTAATGCTCGAGCAGTGA	1208
Db	1406	CTGGAGAATTTGAAAAAATTATCAAACGCCTGCTAGAAACACCTAATGCTCGAGCAGTGA	1465
Qy	1209	TTATGTTTGCCAATGAGGATGACATCAGGAGGATATTGGAAGCAGCAAAAAAACTAAACC	1268
Db	1466	TTATGTTTGCCAATGAGGATGACATCAGGAGGATATTGGAAGCAGCAAAAAAACTAAACC	1525
Qy	1269	AAAGTGGGCATTTTCTCTGGATTGGCTCAGATAGTTGGGGATCCAAAATAGCACCTGTCT	1328
Db	1526	AAAGTGGGCATTTTCTCTGGATTGGCTCAGATAGTTGGGGATCCAAAATAGCACCTGTCT	1585
Qy	1329	ATCAGCAAGAGGAGATTGCAGAAGGGGCTGTGACAATTTTGCCCAAACGAGCATCAATTG	1388
Db	1586	ATCAGCAAGAGGAGATTGCAGAAGGGGCTGTGACAATTTTGCCCAAACGAGCATCAATTG	1645
Qy	1389	ATGGATTGTATCGATACTTTAGAAGCCGAACCTTGCCAATAATCGAAGAAATGTGTGGT	1448
Db	1646	ATGGATTGTATCGATACTTTAGAAGCCGAACCTTGCCAATAATCGAAGAAATGTGTGGT	1705
Qy	1449	TTGCAGAATTCGGGAGGAGAATTTTGCTGCAAGTTAGGATCACATGGGAAAAGGAACA	1508
Db	1706	TTGCAGAATTCGGGAGGAGAATTTTGCTGCAAGTTAGGATCACATGGGAAAAGGAACA	1765

Qy	1509	GTCATATAAAGAAATGCACAGGGCTGGAGCGAATTGCTCGGGATTTCATCTTATGAACAGG	1568
Db	1766	GTCATATAAAGAAATGCACAGGGCTGGAGCGAATTGCTCGGGATTTCATCTTATGAACAGG	1825
Qy	1569	AAGGAAAGGTCCAATTTGTAATTGATGCTGTATATTCCATGGCTTACGCCCTGCACAATA	1628
Db	1826	AAGGAAAGGTCCAATTTGTAATTGATGCTGTATATTCCATGGCTTACGCCCTGCACAATA	1885
Qy	1629	TGCACAAAGATCTCTGCCCTGGATACATTGGCCTTTGTCCACGAATGAGTACCATTGATG	1688
Db	1886	TGCACAAAGATCTCTGCCCTGGATACATTGGCCTTTGTCCACGAATGAGTACCATTGATG	1945
Qy	1689	GGAAGAGCTACTTGGTTATATTTCGGGCTGTAAATTTTAATGGTTGCCGAAGAGGGATCC	1748
Db	1946	GGAAGAGCTACTTGGTTATATTTCGGGCTGTAAATTTTAATGGTTGCCGAAGAGGGATCC	2005
Qy	1749	AGATGTCTCTACCCCTGGCCAACCTCTTTTACTCCTTCATTTTCCAGTAGTTGGGCAGTGC	1808
Db	2006	AGATGTCTCTACCCCTGGCCAACCTCTTTTACTCCTTCATTTTCCAGTAGTTGGGCAGTGC	2065
Qy	1809	TGGCACTCCTGTCACTTTTAATGAAAACGGAGATGCTCCTGGACGTTATGATATCTTCCA	1868
Db	2066	TGGCACTCCTGTCACTTTTAATGAAAACGGAGATGCTCCTGGACGTTATGATATCTTCCA	2125
Qy	1869	GTATCAAATAACCAACAAAAGCACAGAGTACAAAGTCATCGGCCACTGGACCAATCAGCT	1928
Db	2126	GTATCAAATAACCAACAAAAGCACAGAGTACAAAGTCATCGGCCACTGGACCAATCAGCT	2185
Qy	1929	TCATCTAAAAGTGAAGACATGCAGTGGGCTCATAGAGAACATACTCACCCGGCGTCTGT	1988
Db	2186	TCATCTAAAAGTGAAGACATGCAGTGGGCTCATAGAGAACATACTCACCCGGCGTCTGT	2245
Qy	1989	CTGCAGCCTGCCGTGTAAGCCAGGGGAGAGGAAGAAAACGGTGAAAGGGGTCCCTTGCTG	2048
Db	2246	CTGCAGCCTGCCGTGTAAGCCAGGGGAGAGGAAGAAAACGGTGAAAGGGGTCCCTTGCTG	2305
Qy	2049	CTGGCACTGTGAACGCTGTGAAGGTTACAACCTACCAGTGATGAGCTGTCTGTGAACCT	2108
Db	2306	CTGGCACTGTGAACGCTGTGAAGGTTACAACCTACCAGTGATGAGCTGTCTGTGAACCT	2365
Qy	2109	TTGCCCTCTGGATCAGAGACCCAACATGAACCGCACAGGCTGCCAGCTTATCCCCATCAT	2168
Db	2366	TTGCCCTCTGGATCAGAGACCCAACATGAACCGCACAGGCTGCCAGCTTATCCCCATCAT	2425
Qy	2169	CAAATTGGAGTGGCATTCTCCCTGGGCTGTGGTGCCTGTGTTTGTGTGCAATATTGGGAAT	2228
Db	2426	CAAATTGGAGTGGCATTCTCCCTGGGCTGTGGTGCCTGTGTTTGTGTGCAATATTGGGAAT	2485
Qy	2229	CATCGCCACCACCTTTTGATCGTGACCTTTGTCCGCTATAATGACACACCTATCGTGAG	2288
Db	2486	CATCGCCACCACCTTTTGATCGTGACCTTTGTCCGCTATAATGACACACCTATCGTGAG	2545
Qy	2289	GGCTTCAGGACGCGAACTTAGTTACGTGCTCCTAACGGGGATTTTCTCTGTATTCAAT	2348
Db	2546	GGCTTCAGGACGCGAACTTAGTTACGTGCTCCTAACGGGGATTTTCTCTGTATTCAAT	2605
Qy	2349	CACGTTTTTAATGATTGCAGCACCAGATACAATCATATGCTCCTTCCGACGGGTCTTCCT	2408
Db	2606	CACGTTTTTAATGATTGCAGCACCAGATACAATCATATGCTCCTTCCGACGGGTCTTCCT	2665
Qy	2409	AGGACTTGGCATGTGTTTCAGCTATGCAGCCCTTCTGACCAAAACAAACCGTATCCACCG	2468
Db	2666	AGGACTTGGCATGTGTTTCAGCTATGCAGCCCTTCTGACCAAAACAAACCGTATCCACCG	2725
Qy	2469	AATATTTGAGCAGGGGAAGAAATCTGTCACAGCGCCCAAGTTCATTAGTCCAGCATCTCA	2528

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Db 2726 AATATTTGAGCAGGGGAAGAAATCTGTACAGCGCCCAAGTTCATTAGTCCAGCATCTCA 2785

Qy 2529 GCTGGTGATCACCTTCAGCCTCATCTCCGTCCAGCTCCTTGGAGTGTTTGTCTGGTTTGT 2588  
|||||

Db 2786 GCTGGTGATCACCTTCAGCCTCATCTCCGTCCAGCTCCTTGGAGTGTTTGTCTGGTTTGT 2845

Qy 2589 TGTGGATCCCCCACATCATCATTGACTATGGAGAGCAGCGGACACTAGATCCAGAGAA 2648  
|||||

Db 2846 TGTGGATCCCCCACATCATCATTGACTATGGAGAGCAGCGGACACTAGATCCAGAGAA 2905

Qy 2649 GGCCAGGGGAGTGCTCAAGTGTGACATTTCTGATCTCTCACTCATTTGTTCACTTGGATA 2708  
|||||

Db 2906 GGCCAGGGGAGTGCTCAAGTGTGACATTTCTGATCTCTCACTCATTTGTTCACTTGGATA 2965

Qy 2709 CAGTATCCTCTTGATGGTCACTTGTACTGTTTATGCCATTAAACGAGAGGTGTCCAGA 2768  
|||||

Db 2966 CAGTATCCTCTTGATGGTCACTTGTACTGTTTATGCCAATAAACGAGAGGTGTCCAGA 3025

Qy 2769 GACTTTCAATGAAGCCAAACCTATTGGATTACCATGTATACCACCTGCATCATTTGGTT 2828  
|||||

Db 3026 GACTTTCAATGAAGCCAAACCTATTGGATTACCATGTATACCACCTGCATCATTTGGTT 3085

Qy 2829 AGCTTTTCATCCCCATCTTTTTTGGTACAGCCAGTCAGCAGAAAAGATGTACATCCAGAC 2888  
|||||

Db 3086 AGCTTTTCATCCCCATCTTTTTTGGTACAGCCAGTCAGCAGAAAAGATGTACATCCAGAC 3145

Qy 2889 AACAACTTACTGTCTCCATGAGTTTAAAGTGCTTCAGTATCTCTGGGCATGCTCTATAT 2948  
|||||

Db 3146 AACAACTTACTGTCTCCATGAGTTTAAAGTGCTTCAGTATCTCTGGGCATGCTCTATAT 3205

Qy 2949 GCCCAAGGTTTATATTATAATTTTTTCATCCAGAACAGAATGTTCAAAAACGCAAGAGGAG 3008  
|||||

Db 3206 GCCCAAGGTTTATATTATAATTTTTTCATCCAGAACAGAATGTTCAAAAACGCAAGAGGAG 3265

Qy 3009 CTTCAAGGCTGTGGTGACAGCTGCCACCATGCAAAGCAAACCTGATCCAAAAGGAAATGA 3068  
|||||

Db 3266 CTTCAAGGCTGTGGTGACAGCTGCCACCATGCAAAGCAAACCTGATCCAAAAGGAAATGA 3325

Qy 3069 CAGACCAAATGGCGAGGTGAAAAGTGAACCTCTGTGAGAGTCTTGAAACCAACACTTCCTC 3128  
|||||

Db 3326 CAGACCAAATGGCGAGGTGAAAAGTGAACCTCTGTGAGAGTCTTGAAACCAACACTTCCTC 3385

Qy 3129 TACCAAGACAACATATATCAGTTACAGCAATCATTCATCTGAAACAGGGAAATGGCACA 3188  
|||||

Db 3386 TACCAAGACAACATATATCAGTTACAGCAATCATTCATCTGAAACAGGGAAATGGCACA 3445

Qy 3189 ATCTGAAGAGATGTGGTATATGATCTTAAATGATGAACATGAGACCGCAAAAATCACTC 3248  
|||||

Db 3446 ATCTGAAGAGACGTGGTATATGATCTTAAATGATGAACATGAGACCGCAAAAATCACTC 3505

Qy 3249 CTGGAGATCTCCGTAGACTACAATCAATCAAATCAATAGTCAGTCTTGTAAGGAACAAAA 3308  
|||||

Db 3506 CTGGAGATCTCCGTAGACTACAATCAATCAAATCAATAGTCAGTCTTGTAAGGAACAAAA 3565

Qy 3309 ATTAGCCATGAGCCAAAAGTATCAATAAACGGGGAGTGAAGAAACCCGTTTATACAATA 3368  
|||||

Db 3566 ATTAGCCATGAGCCAAAAGTATCAATAAACGGGGAGTGAAGAAACCCGTTTATACAATA 3625

Qy 3369 AAACCAATGAGTGTCAAGCTAAAGTATTGCTTATTCATGAGCAGTTAAACAAATCACAA 3428  
|||||

Db 3626 AAACCAATGAGTGTCAAGCTAAAGTATTGCTTATTCATGAGCAGTTAAACAAATCACAA 3685

Qy 3429 AAGGAAAATAATGTTAGCTCGTGAAAAAAATGCTGTTGAAATAAATAATGTCTGATGT 3488  
|||||

Db 3686 AAGGAAAATAATGTTAGCTCGTG-AAAAAAATGCTGTTGAAATAAATAATGTCTGATGT 3744

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Qy      3489 TATTCTTGATTTTCTGTGATTGTGAGAACTCCCGTTCCTGTCCCACATTGTTTAACTT 3548
          |||
Db      3745 TATTCTTGATTTTCTGTGATTGTGAGAACTCCCGTTCCTGTCCCACATTGTTTAACTT 3804

Qy      3549 GTATAAGACAATGAGTCTGTTTCTTGTAATGGCTGACCAGATTGAAGCCCTGGGTGTGC 3608
          |||
Db      3805 GTATAAGACAATGAGTCTGTTTCTTGTAATGGCTGACCAGATTGAAGCCCTGGGTGTGC 3864

Qy      3609 TAAAAATAAATGCAATGATTGATGCATGCAATTTTATACAAATAATTTATTCTAATA 3668
          |||
Db      3865 TAAAAATAAATGCAATGATTGATGCATGCAATTTTATACAAATAATTTATTCTAATA 3924

Qy      3669 ATAAAGG 3675
          |||
Db      3925 ATAAAGG 3931

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Martinell whose telephone number is (571) 272-0719.

The examiner works a flexible schedule and can be reached by phone and voice mail.

Alternatively, a request for a return telephone call may be e-mailed to [james.martinell@uspto.gov](mailto:james.martinell@uspto.gov). Since e-mail communications may not be secure, it is suggested that information in such requests be limited to name, phone number, and the best time to return the call.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla, can be reached on (571) 272-0735.

#### OFFICIAL FAX NUMBER


The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Any Official Communication to the USPTO should be faxed to this number.

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**James Martinell, Ph.D.**  
**Primary Examiner**  
**Art Unit 1634**

1/4/08